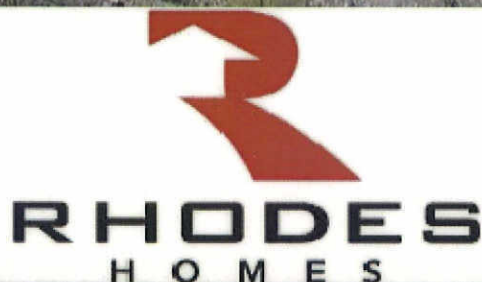
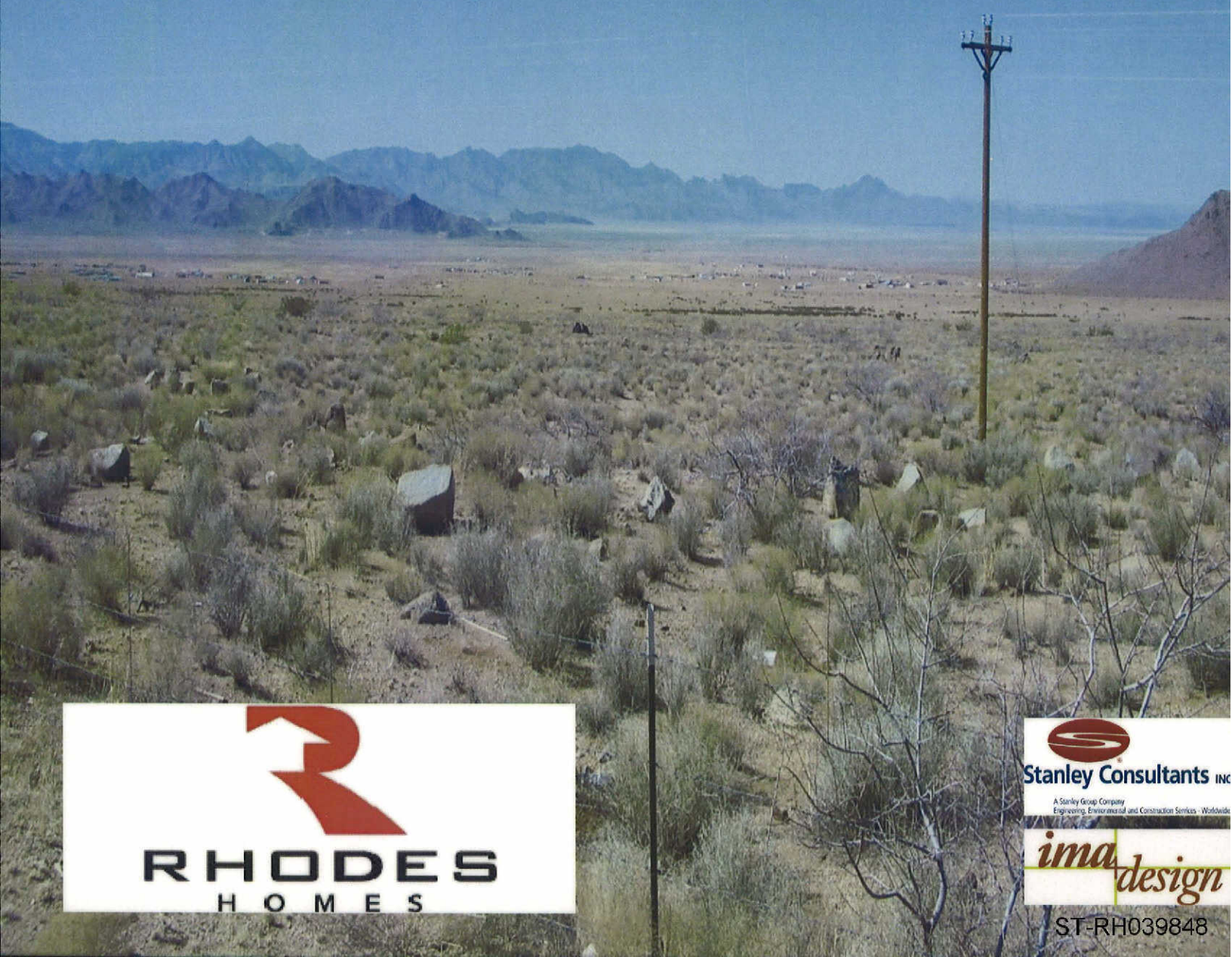


# COUNTY OF MOHAVE *arizona*



## Nugent Ranch Area Plan

March 2006



ST-RH039848

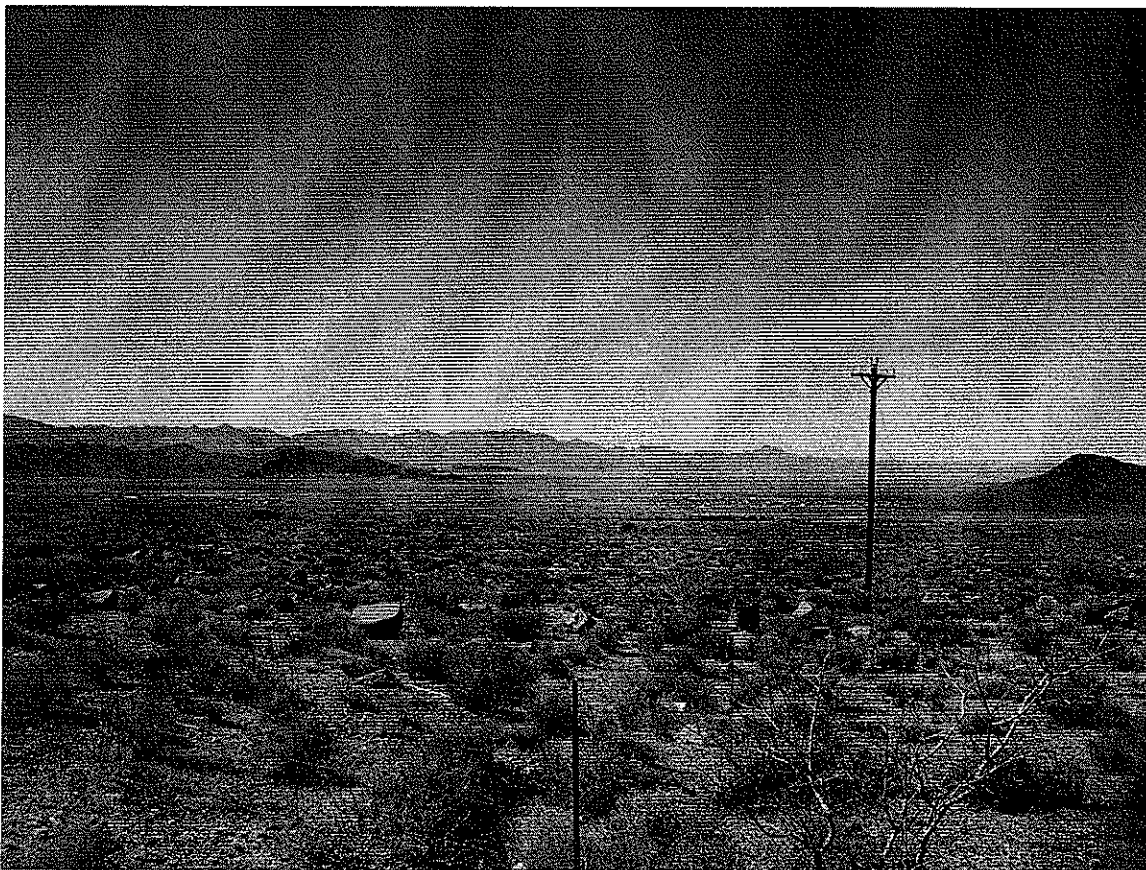


*Dennis Brown*  
*Comments*

**ADDRESSED  
COMPLETELY**

# Nugent Ranch

## Draft Area Plan



© Rhodes Homes

**Prepared by Rhodes Homes for  
Mohave County, Arizona**

**February 2006**

**Prepared by:**

**Rhodes Homes Arizona, LLC.**

**IMA Design, Inc.**

**Stanley Consultants, Inc.**

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**Exhibits:**

Because Rhodes Homes is in the planning process for Nugent Ranch, many of its documents in support of this application are business proprietary and confidential. However, Rhodes Homes will make those documents available for review by Mohave County as they are requested.

**EXHIBITS**

**1. Project Land Use Diagram**

**2. Area Map**

**3. Mohave County Land Use Guide**

## I. THE COMMUNITY VISION OF NUGENT RANCH

The vision for the future of Nugent Ranch is to achieve stable residential neighborhoods with linkages to public facilities and commercial areas. The Master Plans recognize the residential nature of the area and the community orientation of its local commercial centers, providing necessary housing to support the growth of Kingman, surrounding communities and Mojave County. Nugent Ranch has been designed to meld with the natural environment. The Plan envisions that residential neighborhoods incorporate amenities such as parks within neighborhood enclaves and linked together via trails situated alongside preserved natural drainage courses. These provide linkages to schools, services and community amenities while minimizing impact on natural resources. Nugent Ranch has been designed to meld with the natural environment. Community services will be provided to serve the area enhancing the quality of life in Mohave County. A neighborhood-friendly circulation system will accommodate pedestrians, bicyclists, transit, and local and regional traffic. A similar vision is stated for the Hafley Ranch area. The Overall Master Plan Concept is shown on exhibit \_\_\_\_\_.

The \_\_\_\_\_ acres of Nugent Ranch have been planned to create two a high-quality communities – an active retiree community with an 18-hole golf course as its center piece, and an interconnected community for all age groups. As an alternative to crowded, congested metropolitan and suburban areas, Nugent Ranch offers the concept of a two Village Center Districts situated amongst neighborhood enclaves that create a sense of place and distinct neighborhoods in proximity to shopping, cultural and social activities, and recreation. These master-planned community designs will add a new dimension to Mohave County. Coupled with economic development, they will provide new affordable housing and job opportunities for current and future residents of the county. In this way Nugent Ranch serves all age and population groups and addresses the need of Mohave County for quality, affordable housing that is linked to the region's economic development and natural population growth. The U.S. Census Bureau projects that the U.S. population will grow by 42 million people over the next two decades, and the Southwest is expected to remain the fastest-growing region of the country.

Basic principles for the development of Nugent Ranch include:

- Organizes future developments into a series of neighborhoods.
- Provides for an active adult oriented golf community.

- Includes housing mix guidelines by neighborhood to assure a variety of housing types.
- Encourages intercommunity transit
- Nugent Ranch will be a water-responsible community, utilizing grey water and implementing recharge methods to minimize impact on the Hualapai Valley aquifer.
- Integrate economic development into community planning, by dedicating land for commercial/industrial development for the benefit not only of Nugent Ranch but for Mohave County as a whole, and giving the county another venue for economic.
- Provide the infrastructure necessary to support commercial development within Nugent Ranch, so shopping, personal services and entertainment opportunities are fully available to all residents.
- Dedicate land necessary to provide a full range of public facilities and services, including schools, parks, police and fire stations.
- Provide affordable housing for working families, individuals and retirees.
- Strive to develop an energy-conscious community through pilot projects taking advantage of abundant solar energy to help meet home energy needs.

The plan features a mixture of discrete residential neighborhoods woven together with amenities including parks, trails, golf, and lakes providing a safe, pedestrian-friendly link to convenient local parks, the centrally located Community Park, and to neighborhood services. In this way, the Area Plan for Nugent Ranch addresses the requirements of the Mohave County General Plan for self-sustaining communities in outlying areas of the county. It is intended to serve as the basis for a major amendment to the Mohave County General Plan, answering the relevant natural resource, infrastructure and fiscal issues implicit in such an amendment.

## **II. SUMMARY: NUGENT RANCH MASTER PLANNED COMMUNITY**

Nugent Ranch is being master planned consistent with the goals and policies of the Mohave County General Plan as proposed for this site. The site occupies most portions of 4 sections covering a total of approximately 2,520 acres.

## A. Site Description

### 1. Location

The site consists of the following properties, all located in Mohave County, Arizona.

Township	Section	Tax Pin Number
T24N R16W	All of Sections 3,5,9	344-01-011
T25N R16W	Sec.35 Except for SW ¼ of SW ¼	335-01-006

### 2. Adjacent Properties

2. The properties around the site include the Kingman Airport and Kingman Airport Industrial Park to the southeast and open space to the north, west, and east. The entire site falls outside noise contours of the Kingman Airport. U.S. Highway 66 is approximately 10 miles southeast of the site. The BNSF Railroad is located approximately ¼ mile farther from the site. There are a few residential properties scattered throughout the area to the west, north and east and the Valle Vista Golf Course Community is located approximately 8.5 miles to the southeast of the site.

### 3. Site Characteristics

Most of the Nugent Ranch site is vacant open space, previously used as rangeland for livestock grazing. The site is located about the middle of the Hualapai Valley with the Hualapai wash running through it. The rangeland includes a corral and a water tank, but is otherwise undeveloped. Several sand roads serve the area. No utility systems are known to be on the site. The location of the site is shown on the next page.



The area climate includes relatively mild winters with daytime highs between 40 and 50 degrees F with over 280 frost free days per year. Summertime has daytime highs that range between 95 to 100 degrees F with low humidity. About one-half of the annual rainfall comes during the winter months and the balance comes from sporadic summer thundershowers.

The general elevation of the site is approximately 3,000 ft with very little variance.

ST-RH039856

## 6. Geology and Soils

Based on USDA Soil Conservation Service mapping for the area, the dominant soil type in the site area is most likely the Bucklebar sandy loam. This is a deep to moderately deep, well to moderately well drained, coarse grained soil with moderate hydraulic conductivity and a typical depth to the water table of greater than six feet. These soils reportedly do not meet the requirements for hydric soil.

The site and surrounding area are underlain by precambrian age metamorphic rocks, reportedly orthogenesis and paragneiss. Due to the considerable expanse of the site and variation in the topography of the site from west to west, depth to bedrock would be expected to vary greatly beneath the site.

## 7. Hydrogeology

According to the Arizona Department of Water Resources (ADWR), basin and range aquifers are generally the principal sources of ground water in the site area. These aquifers are present in alluvium-filled basins interspersed between ranges of northwest to southwest trending mountains in the northwest portion of Arizona. The site is located within the Hualapai Valley basin.

The Hualapai Valley basin covers an area of approximately 1,820 square miles. The basin is bounded on the west by the Cerbat and White Mountains, on the ~~west~~ <sup>east</sup> by the Grand Wash Cliffs and Music Mountains, on the south by the Peacock and Hualapai Mountains, and on the north by Lake Mead.

The Hualapai Valley basin-fill sediments reportedly range to as much as 6,400 feet thick and have been divided into three separate units: a younger alluvium, an intermediate alluvium, and an older alluvium.

The younger alluvium includes streambed deposits in Hualapai Valley and in various mountain canyons. The unit seldom exceeds 50 feet in thickness and is composed of silt to gravel-sized particles. The younger alluvium yields small amounts of water to stock and domestic wells in mountain canyons. Local rock formations are generally non-water bearing, although fractured and weathered zones in the rocks do provide some water to low-yield wells and numerous springs and seeps.

In the central part of the valley, the younger and intermediate alluviums are above the water table, and therefore, dry. The intermediate alluvium is a dependable aquifer only along the valley margins where the unit intersects the water table. Well yields from the intermediate alluvium range up to 500 gallons per minute. The intermediate alluvium is made up of coarse-grained sands, silts, and clays.

The older alluvium is the main aquifer in the Hualapai Valley basin. Volcanic rocks are reportedly interbedded with the older alluvium in the southern part of Hualapai Valley and form a secondary system. The older alluvium can store and transmit large amounts of water; well yields up to 1,500 gallons per minute have been reported. Depth to water ranges from 500 to 900 feet below land surface in the central and southern parts of the basin to 300 feet below land surface near Nugent Ranch.

## 8. Site History

Review of historical information indicates that past site uses were most likely similar or identical to current site uses, except as noted in the following.

The site currently consists almost entirely of open space, apparently used as range land for cattle grazing. The westernmost portion of the site is located in the Cerbat and White Mountains. The rangeland includes a few corrals and water tanks but is otherwise undeveloped. The area is served by several sand roads. It is most likely these areas have always generally been used in this fashion.

## B. Proposed Master Plan

<sup>feature</sup> Nugent Ranch will be a ~~stable residential neighborhoods~~ <sup>okay</sup> with linkages to public facilities and commercial areas. The Master Plans recognize the residential nature of the area and the community orientation of its local commercial centers, providing necessary housing to support the growth of Kingman, surrounding communities and Mojave County. Nugent Ranch has been designed to meld with the natural environment. The Plan envisions that residential neighborhoods incorporate amenities such as parks within neighborhood enclaves and linked together via trails situated alongside preserved natural drainage courses. These provide linkages to schools, services and community amenities while minimizing impact on natural resources. Nugent Ranch has been designed to meld with the natural environment. Community services will be provided to serve the area enhancing the quality of life in Mohave County. A neighborhood-friendly circulation system will accommodate pedestrians, bicyclists, transit, and local and regional traffic.

## C. Goals of Nugent Ranch Master Planned Community

General Plan Goal 10 – To retain the beauty, the natural setting and resources, and the rural character of the County, while providing opportunities for coordinated growth and development.

Nugent Ranch Master Planned Community will meet this goal by maintaining as many natural features on the site as possible while providing new housing options for the general community and active

adults along with additional shopping and employment opportunities. In particular, Rhodes Homes will liaison with the Arizona Land Department regarding state lands that abut private lands to determine any buffering measures that the state may desire to preserve habitats on state trust lands.

The primary goal of the Nugent Ranch community design is to create a balanced, self-contained community with areas to live, work, shop, play, and learn all in the same location.

Additional project goals include:

1. Goal: To implement the goals and policies of the Mohave County General Plan to the fullest extent possible.

Policy: Work closely with the Mohave County staff, elected officials, and community residents to formulate a plan that represents the best implementation of the General Plan.

2. Goal: To develop a community that is self-sufficient in terms of adequate tax base to support urban services.

Policy: Implement the appropriate special district and other financial mechanisms to channel a portion of new commercial and residential tax revenues into development of community infrastructure, following developer contributions in the early phases of build-out to provide essential services.

3. Goal: To encourage compatibility with surrounding land uses.

Policy: Ensure that adjacent land uses are similar in nature or include a buffer transition zone where uses are dissimilar.

4. Goal: To establish a village and neighborhood structure that provides residential areas supported by parks, open space, recreational and school uses.

Policy: <sup>subdivide</sup> Break the Master Plan land use areas into smaller village and neighborhood areas that include the full complement of community uses at the time of subdivision.

5. Goal: To provide a planned community that complements existing development within the Nugent Ranch area.



Policy: Work closely with the Mohave County staff, elected officials, and community residents to formulate a plan that represents the best implementation of the General Plan.

6. Goal: To provide a range of housing types to meet the varied housing needs within the Kingman area and the greater northwestern Arizona region.

Policy: Provide a broad range of housing types that include housing options for singles, family units, affordable housing, and active adult within the Master Planned Community.

7. Goal: To ensure that the Nugent Ranch project contributes to Mohave County's economic goals and objectives.

Policy: Provide areas for employment growth as well as housing to ensure that a self-sustaining new town is established over time.

8. Goal: To create a strong sense of community through use of the village and neighborhood concept.

Policy: Create a village core for each village as well as a focal point for each neighborhood that encourages community interaction.

9. Goal: To organize land uses within the community to provide safe and convenient vehicular and pedestrian circulation through the project area.

Policy: Provide an interconnected transportation system that offers pedestrian, bicycle, and vehicular transportation options that include bike and pedestrian paths connecting public facilities and commercial establishments to residential areas.

10. Goal: To provide a safe and efficient system for movement of people and goods to and from the project site and within the community itself.

Policy: Design the road system to meet Mohave County design standards.

11. Goal: To ensure that the impacts of the proposed development on the County's existing roadway system will be mitigated.

Policy: Propose solutions to mitigate traffic impacts at the time of subdivision.

12. Goal: To provide land for parks, open space, recreation, and library facilities to meet the needs of Peacock Highland's new residents. 2 NUGENT

Policy: Provide land for adequate park, open space, recreation and library facilities concurrent with development, with dedication of sites at the time of subdivision after consultation with Mohave County.

13. Goal: To provide land for an adequate level of police and fire protection service to meet the needs of the proposed master planned community.

Policy: Provide police and fire substation sites, as mutually determined by Mohave County sheriff and police departments and the applicant with dedication of sites at the time of subdivision.

14. Goal: To provide sites for adequate school facilities to meet the needs of the community's new residents.

Policy: Place new high school(s) on Recreation and Public Purpose (R & PP) sites set aside by the Bureau of land Management where available.

Policy: Provide elementary and middle school sites at the time of subdivision in consultation with the local school districts.

### III. COMMUNITY DEVELOPMENT

#### A. Existing General Plan & Zoning Designations

- 1) General Plan - Nugent Ranch planning area is designated as Rural Development Area (RDA)
- 2) Zoning - AR/36 (agricultural/residential, 36 acre)

#### B. Proposed General Plan and Area Plan (IMA input)

- 1) Land uses proposed for Nugent Ranch Area Plan include two office/business park areas totaling 762.6 acres, medium to high density residential uses, single family residential, village centers with commercial, parks and open space. A total of 2,726.5 acres is utilized for non-residential uses, with a total of 4,449.5 acres planned for residential uses and 46,026 dwelling units.

432.9 acres are planned for park use; 62.3 for clubhouse and recreation and 615.2 for the three golf courses. These numbers may change based on market conditions and development constraints. Prior to zone change requests and subdivision mapping, the developer will formulate and submit a plan for the financing of infrastructure improvements necessary to support a full complement of public facilities and urban services. Public facilities include police and fire stations, sanitation facilities, libraries, schools and parks. Necessary urban services will include retail outlets so residents do not have to drive long distances for basic needs, medical facilities and other professional services.

2) Residential land uses include:

Low Density Residential (LR): This is the lowest density residential development planned within urban areas. It is designed to reflect development between one and five units per acre. This category is used only in UDAs. Since the lot sizes are less than one acre, community sewer or ADEQ approved on-site sewage disposal and water systems are needed, as are other urban services. Low-density residential areas will be developed exclusively with single-family homes, except where planned developments permitting neighborhood commercial uses are approved.

Medium Density Residential (MR): This urban land use category is used to show areas with five (5) or more dwellings per acre, up to twelve (12) dwellings per acre. Typical residential uses in these areas are patio and zero-lot-line homes, mobile home parks, mobile home subdivisions, duplexes, some multi-family projects, and, where specifically approved as part of a planned development, neighborhood commercial development. Full urban services are required for medium density residential development.

High Density Residential (HR): This urban residential category is used to show the highest density planned in Mohave County. Development could range from twelve (12) to a maximum of twenty-five (25) dwelling units per acre. Higher density areas provide opportunities to develop uses such as town homes, apartments or condominiums. Mixed-use developments incorporating office and retail space may be approved in HR areas through the planned development process. High Density Residential uses can serve as an

effective buffer between non-residential development and lower density residential neighborhoods. Full urban services are required for HR development.

3) Non-Residential Uses Include:

Neighborhood Commercial (NC): Neighborhood Commercial uses are those that meet the needs of residents in the adjacent neighborhood. Small-scale retail and service establishments, as well as small office buildings, will be permitted in this land use category.

General Commercial (GC): This land use category is used to indicate locations for retail, service and office uses that serve an entire community or region. Major retail centers, fast food restaurants, service stations, multi-story office buildings, and other intensive commercial uses should be located in areas designated for general commercial uses.

Commercial Recreation (CR): This land use category encompasses a broad range of privately owned leased facilities for active recreation, where the primary activity occurs outside of buildings. Uses include golf courses, equestrian centers, small and large-scale amusement parks, as well as recreational vehicle parks and campgrounds providing sites for temporary habitation.

Light Industrial (LI): This land use category is intended for a variety of lighter industrial uses. These uses typically involve fewer impacts on the surrounding areas, in terms of noise, fumes, nuisances, and hazards, than do the uses described under Heavy Industrial. This category includes uses such as warehousing, wholesale sales and distribution, and light manufacturing. Some related office uses also occur in this category. Most activities associated with uses in this category take place within buildings.



**C. Proposed Land Use Plan****LAND USE SUMMARY**

Area	Land Use
1,035 ac	Low Res
341 ac	High Res
164 ac	Town Center
31 ac	Park
97 ac	Sports Park
34 ac	Park/Elementary School
41 ac	Junior/Middle School
177 ac	Greenbelt/Wash

**\*Acreage may change based on refinement of development plans.**

**D. Phasing (IMA Input)**

Nugent Ranch will be developed in three phases, with the first phase expected to begin construction in 2008. Market factors will determine the timing of the second and third phases of the community. The initial phase will encompass the three most westerly sections of the project, which can be most easily served by access from the existing Mohave Airport Drive connecting the community with Highway 66 and a new arterial extending south from Nugent Ranch to the DW Ranch interchange at Interstate 40. Other access improvements will allow development to proceed to the four middle sections of the development, and then to the western-most sections of Nugent Ranch. Phasing will depend on market conditions and the success of Nugent Ranch in attracting both active adults/retirees and working families, as well as the ability of Rhodes Homes to attract retailers to the office/business park adjacent to the Kingman Airport.

**E. Economic Development**

Rhodes Homes believes Mohave County and Kingman are uniquely positioned to take advantage of economic and demographic trends that

favor the region in terms of job creation and population growth. Rhodes Homes also believes it can be a partner with Mohave County in helping the region fulfill its economic potential, improving the standard of living and quality of life for current and future residents.

The U.S. Census Bureau projects that the U.S. population will grow by 42 million people over the next two decades, and the Southwest is expected to remain the fastest-growing region of the country. Mohave County is in the path of this growth, because of its climate, logistics and proximity to major metropolitan areas such as Southern California, Phoenix and Las Vegas. Furthermore, Arizona is the second fastest-growing state in the nation behind Florida in net migration of retirees, whose numbers will grow as "baby boomers" retire and move from metropolitan areas to more livable locales.

Mohave County has a number of attributes that make it a strong candidate for economic growth. It has excellent transportation logistics, with access to rail, highway and air transportation, and is located along the CANAMEX Corridor, which is intended to spur international trade among Mexico, Canada and the U.S. The county has a low cost of doing business, making it attractive to manufacturing and distribution companies seeking an alternative to higher costs and regulatory constraints in California and elsewhere.

Mohave County's mild climate and natural beauty already have established it as a magnet for retirees, but this trend will accelerate as "baby boomers" seek affordable homes in desirable locations to spend their retirements. This migration of new retirees will trigger the need for businesses and services to meet their needs, including medical and professional offices.

Rhodes Homes sees Nugent Ranch playing an integral role in expanding the Mohave County economy, not only providing housing for working families and retirees but helping to create jobs by establishing commercial/office sites adjacent to the Kingman Airport and the Kingman Airport Industrial Park. Those commercially dedicated acres will complement current local efforts to draw new companies to the industrial park, which has been the site of primarily manufacturing and distribution companies. Rhodes Homes believes its office park acreage on the western side of the airport can logically be used for corporate headquarters, back-office functions and service-oriented businesses. In addition, Nugent Ranch will generate a significant amount of retail and service business activity within the community itself, creating new opportunities for small businesses, with their resulting employment generation.

DO

DO

Rhodes Homes intends to take an active role in promoting Mohave County as a good place to do business, working with local economic development officials in marketing outreach. In addition, Rhodes Homes will help local education officials address the issue identified by state and other economic studies as the largest impediment to economic growth and diversification in Mohave County – an undereducated workforce. Rhodes Homes will investigate working with Mohave County Community College to develop vocational educational programs that improve skill levels of the local workforce. It also will promote the idea within the state that Mohave County should be the site of a four-year college as the county's population base justifies it.

*DO NOT THIS Red Lake?*

### **Economic Development Goals and Policies**

1. Goal: Develop a community that is both self-supporting in providing services to its residents.

Policy: Designate sufficient land and provide infrastructure to support commercial development within Nugent Ranch, facilitating development of retail, personal services and recreation businesses in the community.

2. Goal: Develop a community that adds to the economic base of Mohave County, encouraging new businesses that provide higher-paying jobs.

Policy: Establish an office park site on the western edge of Nugent Ranch that links the development to the Kingman Airport Industrial Park. *?*

3. Goal: Establish the reputation of Mohave County and Kingman as a good place to do business.

Policy: Engage in promotional activities highlighting the attributes of Mohave County, in terms of transportation logistics, cost of doing business and lifestyle.

4. Goal: Improve educational level of workforce in Mohave County.

Policy: Work with Mohave County Community College to expand vocational training for targeted industries; promote ultimate goal of four-year college in Mohave County.

*isn't this part of Red Lake Community? YES.*

#### **IV. NATURAL RESOURCES**



##### **A. Water Resources**

Rhodes Homes recognizes that water is a precious resource in Mohave County. It is exercising due diligence in proving out adequate groundwater resources for Nugent Ranch, based on well drilling and hydro-geological studies of the Hualapai Valley Basin that will provide both Mohave County and the State of Arizona with a better understanding of water resources in the basin. Ultimately, the Arizona Department of Water Resources (ADWR) will determine, based on these hydro-geological studies and other information, whether the Hualapai Valley Basin aquifer is adequate to support Nugent Ranch as well as current committed demand for water in the region, including pre-platted lots that draw from the same groundwater resources. Rhodes Homes understands that a statement of



water adequacy from ADWR is a critical precursor for its development plans at Nugent Ranch. As a matter of general policy, Rhodes Homes is committed to exploring and implementing where feasible technologies and conservation techniques that minimize the impact of the development on groundwater resources, including recharge, xeriscaping and use of "grey water." A detailed water budget will be prepared for Rhodes Homes subdivisions as part of its plan submissions. For purposes of its water use projections, Rhodes Homes is calculating that consumption will average .20 acre feet per capita annually.

Nugent Ranch will be a community known for utilizing water resources that serve the best interests of the Hualapai Valley Basin. Potable water supply issues will always be of paramount importance in the desert. Rhodes Homes recognizes the importance of the potable water resource. In that vein, the Nugent Ranch community will make use of treated wastewater (effluent) for all public spaces and golf courses within the community, as soon as sufficient quantities of treated effluent are available from new subdivisions. If excess effluent is available, it will be directly recharged into the Hualapai Valley Basin aquifer.

Rhodes Homes will provide A+ treated effluent usable for all purposes, including public spaces where children are present. The system will include pipelines, booster pumps and storage facilities as required to deliver the effluent to the public spaces and golf courses. Storage lakes at public spaces and golf courses may be used to provide "amenity" features.

The potable water supply for Nugent Ranch will be designed to service the community on a growth basis. Rhodes Homes has three possible alternatives for the potable water supply system. They include annexation with the City of Kingman (the Nugent Ranch western boundary is adjacent to the City's 2020 Plan area), which would include an expansion of the City's service area to include the Nugent Ranch property. Rhodes Homes also could establish a "Nugent Ranch Water Company" or pursue opportunities with private water companies. Both of these latter options require approval through Mohave County and the Arizona Corporation Commission.

The potable water system will be designed to meet system demand and fire flow demand, both in terms of minimum required pressures and quantities. Rhodes Homes will coordinate with the authority having jurisdiction over fire fighting in the development to meet their needs for flow and pressure requirements and fire fighting facilities, including station houses.

1. Goal: Design and construct a safe drinking water system.

Policy: Rhodes Homes will design and construct a drinking water system that meets all ADWR, ADEQ and Mohave County requirements for water quality and quality of the constructed product.

2. Goal: Integrate the Nugent Ranch drinking water system into a regional drinking water system

Policy: As regional development occurs, work with neighbors to develop a regional drinking water system that ties developments together in a common system, either through mutual aid interconnects or a completely integrated system.

3. Goal: Reduce the need for drinking water usage outside the home.

Policy: Construct a waste water treatment plant that provides high-quality effluent for use on all open public spaces and golf courses; encourage homeowners to apply xeriscaping to their properties where that is feasible. Sections of Nugent Ranch will be set aside specifically for xeriscape landscaping.

4. Goal: Replenish groundwater resources through recharge.

Policy: Investigate and apply where feasible and effective technologies to capture and inject rainwater runoff into the ground.

## **B. Air Quality**

To preserve air quality, the road network of the Nugent Ranch community is designed to allow free travel to the commercial portions of the development. Businesses will be encouraged to locate within the community to reduce the travel time for commuters.

During construction, the greatest air quality threat is dust. A "Best Management Practices" (BMP) plan is being established to reduce the dust during all phases of construction, and workers will be educated in dust control.

1. Goal: Control smog from commuter traffic.

Policy: Provide opportunities for the business community to develop an internal employment base in the development, starting with planning and design of the master plan, so that daily employment commutes are internal to the development as much as possible.

2. Goal: Control dust pollution during construction.

Policy: Create a BMP which addresses dust control.

#### **D. Habitat Protection**

As part of the due diligence process, a phase I Environmental Site Assessment is being conducted for the community area. This study will allow Rhodes Homes to identify any known environmental hazards in the area and also create a listing of the species of plants and animals currently utilizing the area.

Hualapai Wash which is a major wash crosses the property, some of which will be left open for animal habitat. However, road crossings and drainage conveyance structures will have to be built which will cause impacts. Best efforts will be made to preserve native vegetation and animal habitat in wash areas.

Rhodes Homes is currently investigating the environmental issues related to the Red Lake property.

1. Goal: Protect existing flora/fauna.

Policy: Leave washes undisturbed as much as possible.

2. Goal: Protect native wildlife.

Policy: Provide a pathway through the project for the movement of wildlife in and around the property

3. Goal: Protect plant and wildlife long term.

Policy: Construct localized detention/retention basins throughout the community to capture contaminated runoff and keep it from entering the wash system.

#### **E. Energy Conservation**

Nugent Ranch will be an energy-conscious community. It will encourage its homebuyers to participate in UniSource Energy Services' "SunShare" program for solar-powered homes, reducing reliance on fossil fuel-produced energy and relying on the abundant sunshine of the region to meet home energy needs. In addition, passive solar opportunities and energy-saving building materials will be incorporated into site planning and

home construction. As it has in Nevada, Rhodes Homes will build homes in Mohave County that are Energy Star compliant.

UniSource Energy Services' "SunShare" program provides subsidies to homeowners for installation of photovoltaic systems and allows homeowners to sell excess solar energy into the power grid. Nugent Ranch will introduce the "SunShare" program to its homebuyers and promote its benefits. A portion of model homes in Nugent Ranch will be equipped with a solar photovoltaic system and solar hot water stub-outs to demonstrate how solar energy can be incorporated into home design, and prospective homebuyers will be provided with information about cost amortization of photovoltaic systems.

Road circulation patterns in Nugent Ranch will be designed to move vehicular traffic efficiently through the development. More importantly, with its town center and village-oriented concepts, Nugent Ranch will be a community where residents can walk or bicycle to shopping and recreation opportunities, reducing vehicle trips.

1. Goal: Expedite and reduce vehicular traffic throughout Nugent Ranch.

Policy: Incorporate street design in Nugent Ranch that moves traffic efficiently through the community; reduce vehicle trips through community design focused on homes within walking distance of shopping and entertainment.

- F. Goal: Reduce reliance on fossil fuel-produced energy in favor of solar-produced energy.

Policy: Introduce homebuyers to "SunShare" program to meet home energy needs through solar power. Incorporate photovoltaic systems into model home complexes.

- G. Goal: Maximize energy efficiency of homes.

Policy: Design and build homes that can be certified under the Energy Star program as energy efficient.

## **V. PUBLIC INFRASTRUCTURE AND FACILITIES**



## **A. Infrastructure**

### **1. Roads**

#### **a. Access Roads**

A traffic model has been created based on the “planning bubble” diagrams and the proposed density of the area. The model used algorithms for the determination of car trips within, from and to the area. Proximity to the City of Kingman, Lake Mead Recreation Area and the West Rim of the Grand Canyon were considered in the traffic analysis. The average number of trips that a community of this size will take for work, play and other purposes, based on national trends, is used. One of the goals of Nugent Ranch is to create a community that has a high degree of self-sufficiency, hence reducing the number of vehicle trips by residents outside the community for work, shopping and recreation, and minimizing the impact on Mohave County’s road system.

Traffic access to Nugent Ranch will initially be provided along the existing county roads - Stockton Hill Road (C.R. 20) and Antares Road (C.R. 149). Improvements will be examined to meet the anticipated increased traffic demands from this community.

#### **b. Interior Road Network**

The design of the interior road network is based upon the “community” theme. This theme includes several north/south arterial streets which pass through the community and west/east arterial streets that serve only the community. Minor arterials will branch from the major arterials into the various subdivisions of the development.

Each subdivision will have at least one access point to the minor arterials. Minor arterials will connect the communities to the major arterials which convey traffic through, in and out of the community.

1. Goal: Provide easy functional access to the community.

Policy: Develop multiple points of ingress/egress. Design the road system so that cars are not all funneled to a single point.

2. Goal: Reduce the number of cars “passing through” the property.

Policy: Design a road network that funnels north/south pass through traffic to the pass-through arterials. Develop the rest of the road network with curvilinear designs that reduce speed and deter pass-through traffic.

3. Goal: Provide an open and scenic driving experience.

Policy: Construct roadways with landscape along the development setback boundaries such that the landscaping decreases noise and adds aesthetic appeal. Also, construct arterials which have parks and other amenities adjacent to enhance the beauty of the existing landscape.

## **2. Water Delivery System**

Nugent Ranch is located approximately one mile away from existing City of Kingman water facilities. Extending the Kingman system to serve the four sections of Nugent Ranch should be considered prior to planning and developing an independent water system for the community.

Potable water for the Nugent community will be supplied by groundwater from the Hualapai Basin. Wells will be utilized to pump groundwater into storage reservoirs, which will feed the Nugent community by gravity. Independent transmission pipelines and separate distribution pipelines are recommended. Site topology dictates the need for only one pressure zone to serve the development; however, two reservoir storage sites are recommended to enhance system performance and provide system redundancy.

1. Goal: Expand City of Kingman system to serve Nugent Ranch.

Policy: Investigate potential annexation by City of Kingman.

2. Goal: Provide safe, clean, and constant water supply.

Policy: Plan, design, and construct a drinking water system that meets all ADWR, ADEQ, and Mohave County requirements.

3. Goal: Provide full domestic and fire water supply.

Policy: Plan, design, and construct a water system with adequate capacity and pressure to serve daily system demands and emergency fire suppression needs.

4. Goal: Provide a 100-year adequate water supply.

Policy: Apply for a 100-year Adequate Water Supply certificate from ADWR. The application will be for a water demand equal to or greater than the proposed development.

5. Goal: Conserve water through the use of "grey water."

Policy: Use treated effluent for irrigation of the community's golf course and park spaces.

### **3. Sewage Collection and Treatment**

The Nugent community will rely on a gravity system with lift stations for wastewater collection. The lift station will be used to transport wastewater to the treatment plant. The Nugent wastewater collection system will be designed in accordance with State and County requirements.

The Nugent treatment plant will be located outside the 100-year flood plain. This will require the use of low-head lift stations to pump wastewater out of the development to a suitable elevation above the floodplain. The design of the Nugent sewage treatment plant will be modular. This allows the owner to minimize initial capital expenditures while being able to maintain optimum treatment capacity. As the community develops, additional treatment capacity can be modularly constructed.

1. Goal: Provide a sewage collection system for the Nugent community.

Policy: Plan, design, and construct a wastewater collection system which meets ADEQ and Mohave County requirements.

2. Goal: Provide sewage treatment for the Nugent community.

Policy: Plan, design, and construct a wastewater treatment system which provides high-quality effluent and may be expanded to meet increasing development contributions.

3. Goal: Provide effluent disposal facilities for excess Nugent effluent.

Policy: Plan, design, and construct effluent disposal facilities (rapid infiltration basins, recharge wells, ect.) to dispose effluent in excess of community's reclaimed demand.

4. Goal: Maximize reuse of sewage effluent.

Policy: Construct a sewage treatment plant which provides high-quality effluent for use on all public open spaces. Construct a piping system to convey the re-use water to all public open spaces.

#### 4. Flood control

The Nugent Ranch community straddles the Hualapai Wash extending to the east slopes of the Cerbat Mountain. By and large the Nugent Ranch parcels do not have significant restrictions due to flood plain encroachment.

Within the community, each major subdivision will provide local detention facilities doubling as recreation areas to mitigate runoff to predevelopment levels and improve water quality.

Flood control through the development is intended to be handled by maximizing use of the washes that cut through the development. Utilizing the natural washes in this manner reduces the amount of grading necessary, allowing for a trail system in the open spaces, reducing the cost of development and improving the aesthetic appeal. Where necessary, <sup>CLONE and COMB</sup> applications will be made to FEMA to realign the Special Flood Hazard Areas to the improved limits.

1. Goal: Provide a safe environment for the community.

Policy: Combine maximum usage of the existing wash system with intelligent design of multi-use detention basins and strategic wash improvements to create a flood control system that routes a 100-year design storm safely through the development.

2. Goal: Accommodate the Clean Water Act and the FEMA regulations.

Policy: Provide applications to the federal agencies early in the process; get them involved in the design of the community.

3. Goal: Protect plant and animal life long term.

Policy: Construct localized detention/retention basins throughout the community to restore runoff levels to predevelopment levels, filtering the water and thus preventing contaminants from entering the wash system.



## B. Public Facilities

### 1. Parks

#### PARK AND RECREATIONAL STANDARDS

Parks, recreation and open space facilities will be provided for Nugent Ranch in concert with the national standards shown in the following tables:

Feature Category	Park System Feature	Units Needed per 1,000 residents	Acres Per 1,000 Residents
Parks	Pocket Parks –Min. 1/3 acre	Service Area- ¼ mile radius	.25
Parks	Neighborhood Parks – Min. 4 acres	Service area - ½ mile radius	.5 acres per 1,000 Serves 2,500 min.
Parks	Community – Min. 20 acres	Service area - 2 mile radius	1-2 acres per 1,000 Serves min. 10,000
Community Center	3 acres and 10,000 sq. ft.		1 per 20,000
Outdoor Recreation	Small Skate park	.16	.03
	Full Sized Skate park	.06	.03
	BMX Track	.16	.50
	Paved Multi-Use Trail (per mile)	1.04	2.53
	Dirt/Gravel Multi-Use Trail (per mile)	2.33	4.25
	Family Picnic Area	6.25	.08
	Group Picnic Area with Shelter	.36	.74
	Park Bench	7.69	.00
	Outdoor Events Venue (per acre)	.42	1.34

Source: Small Community Parks & Recreation Planning Standards – 2003.

Facility/Activity	Recommended Space Requirements	No. of Units per Population	Service Radius
Basketball	2,400 to 7,280 sq. ft.	1 per 5,000	¼ to ½ mile
Handball	800 to 1,000 sq. ft.	1 per 20,000	15 to 30 minute travel time

Ice Hockey	22,000 sq. ft.	1 per 100,000	½ to 1 hr travel time
Tennis	2 acres per complex	1 court per 2,000	¼ to ½ mile
Volleyball	Minimum 4,000 sq. ft.	1 per 5,000	¼ to ½ mile
Baseball	1.2 acre	1 per 5,000 Lighted 1 per 30,000	¼ to ½ mile
Field Hockey	1.5 acre	1 per 20,000	15 to 30 min. travel time
Football	1.5 acre	1 per 20,000	15 to 30 min. travel time
Soccer	1.7 to 2.1 acres	1 per 10,000	1-2 miles
Golf driving range	13.5 acres	1 per 50,000	30 min. travel time
1.4 mile running track	4.3 acres	.1 per 20,000	15 to 30 min. travel time
Multiple Recreation court	9, 840 sq. ft.	1 per 10,000	1-2 miles
Trails		1 system per region	
Archery Range	.65 acres	1 per 50,000	30 min. travel time
Golf 18 holes	110 acres min.	1 per 50,000	½ to 1 hr. travel time
Swimming Pools	½ to 2 acres	1 per 20,000	15 to 30 min. travel time

Source: Lancaster, R.A. (Ed.).(1990). Recreation, Park, and Open Space Standards and Guidelines. Ashburn, VA: National Recreation and Park Association

Substantial acreage is allocated for park facilities at Nugent Ranch. These will include several community parks, neighborhood parks, and a number of linear and mini-parks located throughout the project. It is anticipated that community recreation centers will be provided central to the community. Three golf courses are planned: two in the active adult communities in the south-central part of the site and one in the more exclusive western portion of the site. Walking paths will link residential areas to the office, park, and community facilities on site.

## **Parks and Open Space Goals and Policies**

Mohave County General Plan Goal 55: To meet the recreational and open space needs of residents countywide, with sites that provide for active recreation, specialized recreational opportunities and enjoyment of natural areas.

Policy: The applicant will work with Mohave County school districts in the development, maintenance and joint operation of local school/park sites where it is economically and functionally desirable to do so.

Policy: Provide a full range of parks and recreational facilities for the broad range of housing and lifestyle types available at Nugent Ranch.

Goal 15: Provide all manner of park sites from the pocket park to the neighborhood park and the community park within the Nugent Ranch development.

Policy: Provide a community park in each village and neighborhood and pocket parks within each neighborhood consistent with the standards referenced above.

Policy: Dedicate park sites at the time of subdivision after consultation with Mohave County on final park size and location to serve final projected population.

Policy: Provide outdoor gathering spaces in the form of a town green or plaza, linear parks, community gardens, gazebos, and passive open space areas.

## **2. Fire Protection**

Mohave County General Plan Goal 57: To plan and provide for adequate fire protection services at levels appropriate to the County's urban, suburban, and rural areas.

Policy: Work closely with the area Fire Department to determine an adequate urban level of fire protection services.

Policy: Provide fire protection site within Nugent Ranch planned community, if determined necessary in conjunction with the appropriate Fire Department.

### **3. Police Protection**

Mohave County General Plan Goal 57: To plan and provide for adequate police protection services at levels that are appropriate to the County's Urban, Suburban, and Rural areas.

Policy: Work closely with the area police and sheriff's departments to determine an adequate urban level of police protection services.

Policy: Dedicate police protection site within the Nugent Ranch planned community, if determined necessary in conjunction with the appropriate police/sheriff's department.

### **4. Library Services**

Mohave County General Plan Goal: To provide a full service library system that is easily accessible and supplies residents with a variety of educational and recreational materials.

Policy: Mohave County should expand library services by planning space for station libraries as part of public buildings in outlying communities.

Policy: The applicant will work with Mohave County to provide a site for library facilities within Nugent Ranch.

### **5. Schools**

Goal: Establish new school sites in the Nugent Ranch development to serve the needs of the community's new families.

Policy: Place new high school(s) on Recreation and Public Purpose (R & PP) sites set aside by the Bureau of Land Management where available to serve the Nugent Ranch project.

Policy: Set aside parcels for elementary and middle school sites during the subdivision review process as agreed upon with the Mohave Valley Elementary District and the Mohave Union High School Districts and the Superintendent of Schools. Work with



school districts to time school construction with development of the community.